

SEQUENCE LISTING

<110> CHUGAI SEIYAKU KABUSHIKI KAISHA
KATO, Yukio
KAWAMOTO, Takeshi
KOYANO, Yasuhiko

<120> Human Fetus Chondrocyte-Derived Gene

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<140> US 09/555,342

<141> 2000-05-26

<150> PCT/JP98/05348

<151> 1998-11-27

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<170> PatentIn Ver. 2.0

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<400> 6

aaagacctca ccctccatct 20

<210> 7
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<220>
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<400> 7

gtcgattacg tggagagcta 20

<210> 8
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<400> 8

atgaacttct tcaccagctc 20

<210> 9
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atcagaccca gctcccaaag 20

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cacagaccca gctcccaaac 20

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ccttcaggaa aactcgtgtc 20

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ttggagttgt gtgtggtcag 20

<210> 15
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<400> 15

gccaaaatag tcaccttcca cgagg 25

<210> 16

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<400> 16

ccttcaggaa aactcgtgtc 20

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<400> 17

aaacgraaga aygtrtgtrtg ytcwacaca 29

<210> 18
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ttccagctcc tagagattgc 20

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tcgtcttcgc tctcctcaat 20

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tcacttcgtg gtttcagagc 20

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<400> 22

tcgtcttcgc tctcctcaat 20

<210> 23
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<212> PRT
<213> Homo sapiens

<400> 23

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Pro	Glu	Asn	Ser	Gly	Ile	Ser	Thr	Leu	Glu	Arg	Gly	Gln	Lys	Pro	Pro
		20						25					30		

Pro	Thr	Pro	Ser	Gly	Lys	Leu	Val	Ser	Ile	Lys	Ile	Gln	Met	Leu	Asp
	35						40					45			

Asp	Thr	Gln	Glu	Ala	Phe	Glu	Val	Pro	Gln	Arg	Ala	Pro	Gly	Lys	Val
	50					55					60				

Leu	Leu	Asp	Ala	Val	Cys	Asn	His	Leu	Asn	Leu	Val	Glu	Gly	Asp	Tyr
65					70				75						80

Phe	Gly	Leu	Glu	Phe	Pro	Asp	His	Lys	Lys	Ile	Thr	Val	Trp	Leu	Asp
				85					90					95	

Leu	Leu	Lys	Pro	Ile	Val	Lys	Gln	Ile	Arg	Arg	Pro	Lys	His	Val	Val
			100					105					110		

Val	Lys	Phe	Val	Val	Lys	Phe	Phe	Pro	Pro	Asp	His	Thr	Gln	Leu	Gln
		115					120					125			

Glu	Glu	Leu	Thr	Arg	Tyr	Leu	Phe	Ala	Leu	Gln	Val	Lys	Gln	Asp	Leu
		130				135					140				

Ala	Gln	Gly	Arg	Leu	Thr	Cys	Asn	Asp	Thr	Ser	Ala	Ala	Leu	Leu	Ile
145					150					155					160

Ser	His	Ile	Val	Gln	Ser	Glu	Ile	Gly	Asp	Phe	Asp	Glu	Ala	Leu	Asp
				165					170					175	

Arg Glu His Leu Ala Lys Asn Lys Tyr Ile Pro Gln Gln Asp Ala Leu
 180 185 190
 Glu Asp Lys Ile Val Glu Phe His His Asn His Ile Gly Gln Thr Pro
 195 200 205
 Ala Glu Ser Asp Phe Gln Leu Leu Glu Ile Ala Arg Arg Leu Glu Met
 210 215 220
 Tyr Gly Ile Arg Leu His Pro Ala Lys Asp Arg Glu Gly Thr Lys Ile
 225 230 235 240
 Asn Leu Ala Val Ala Asn Thr Gly Ile Leu Val Phe Gln Gly Phe Thr
 245 250 255
 Lys Ile Asn Ala Phe Asn Trp Ala Lys Val Arg Lys Leu Ser Phe Lys
 260 265 270
 Arg Lys Arg Phe Leu Ile Lys Leu Arg Pro Asp Ala Asn Ser Ala Tyr
 275 280 285
 Gln Asp Thr Leu Glu Phe Leu Met Ala Ser Arg Asp Phe Cys Lys Ser
 290 295 300
 Phe Trp Lys Ile Cys Val Glu His His Ala Phe Phe Arg Leu Phe Glu
 305 310 315 320
 Glu Pro Lys Pro Lys Pro Lys Pro Val Leu Phe Ser Arg Gly Ser Ser
 325 330 335
 Phe Arg Phe Ser Gly Arg Thr Gln Lys Gln Val Leu Asp Tyr Val Lys
 340 345 350
 Glu Gly Gly His Lys Lys Val Gln Phe Glu Arg Lys His Ser Lys Ile
 355 360 365
 His Ser Ile Arg Ser Leu
 370
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 <211> 347
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 <213> Homo sapiens
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 Met Pro Lys Pro Ile Asn Val Arg Val Thr Thr Met Asp Ala Glu Leu
 1 5 10 15
 Glu Phe Ala Ile Gln Pro Asn Thr Thr Gly Lys Gln Leu Phe Asp Gln
 20 25 30
 Val Val Lys Thr Ile Gly Leu Arg Glu Val Trp Tyr Phe Gly Leu His
 35 40 45
 Tyr Val Asp Asn Lys Gly Phe Pro Thr Trp Leu Lys Leu Asp Lys Lys
 50 55 60
 Val Ser Ala Gln Glu Val Arg Lys Glu Asn Pro Leu Gln Phe Lys Phe
 65 70 75 80
 Arg Ala Lys Phe Tyr Pro Glu Asp Val Ala Glu Glu Leu Ile Gln Asp

85								90				95				
Ile	Thr	Gln	Lys	Leu	Phe	Phe	Leu	Gln	Val	Lys	Glu	Gly	Ile	Leu	Ser	
			100					105					110			
Asp	Glu	Ile	Tyr	Cys	Pro	Pro	Glu	Thr	Ala	Val	Leu	Leu	Gly	Ser	Tyr	
		115					120					125				
Ala	Val	Gln	Ala	Lys	Phe	Gly	Asp	Tyr	Asn	Lys	Glu	Val	His	Lys	Ser	
	130					135					140					
Gly	Tyr	Leu	Ser	Ser	Glu	Arg	Leu	Ile	Pro	Gln	Arg	Val	Met	Asp	Gln	
145					150					155				160		
His	Lys	Leu	Thr	Arg	Asp	Gln	Trp	Glu	Asp	Arg	Ile	Gln	Val	Trp	His	
				165				170						175		
Ala	Glu	His	Arg	Gly	Met	Leu	Lys	Asp	Asn	Ala	Met	Leu	Glu	Tyr	Leu	
			180					185					190			
Lys	Ile	Ala	Gln	Asp	Leu	Glu	Met	Tyr	Gly	Ile	Asn	Tyr	Phe	Glu	Ile	
		195					200					205				
Lys	Asn	Lys	Lys	Gly	Thr	Asp	Leu	Trp	Leu	Gly	Val	Asp	Ala	Leu	Gly	
	210					215					220					
Leu	Asn	Ile	Tyr	Glu	Lys	Asp	Asp	Lys	Leu	Thr	Pro	Lys	Ile	Gly	Phe	
225					230					235				240		
Pro	Trp	Ser	Glu	Ile	Arg	Asn	Ile	Ser	Phe	Asn	Asp	Lys	Lys	Phe	Val	
				245				250						255		
Ile	Lys	Pro	Ile	Asp	Lys	Lys	Ala	Pro	Asp	Phe	Val	Phe	Tyr	Ala	Pro	
			260					265					270			
Arg	Leu	Arg	Ile	Asn	Lys	Arg	Ile	Leu	Gln	Leu	Cys	Met	Gly	Asn	His	
		275					280					285				
Glu	Leu	Tyr	Met	Arg	Arg	Arg	Lys	Pro	Asp	Thr	Ile	Glu	Val	Gln	Gln	
	290					295					300					
Met	Lys	Ala	Gln	Ala	Arg	Glu	Glu	Lys	His	Gln	Lys	Gln	Leu	Glu	Arg	
305					310					315				320		
Gln	Gln	Leu	Glu	Thr	Glu	Lys	Lys	Arg	Arg	Glu	Thr	Val	Glu	Arg	Glu	
				325				330					335			
Lys	Glu	Gln	Met	Met	Arg	Glu	Lys	Glu	Glu	Leu						
		340						345								
<210> 25																
<211> 334																
<212> PRT																
<213> Homo sapiens																
<400> 25																
Met	His	Cys	Lys	Val	Ser	Leu	Leu	Asp	Asp	Thr	Val	Tyr	Glu	Cys	Val	
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Val	Glu	Lys	His	Ala	Lys	Gly	Gln	Asp	Leu	Leu	Lys	Arg	Val	Cys	Glu	
			20					25					30			

His	Leu	Asn	Leu	Leu	Glu	Glu	Asp	Tyr	Phe	Gly	Leu	Ala	Ile	Trp	Asp	
		35					40					45				
Asn	Ala	Thr	Ser	Lys	Thr	Trp	Leu	Asp	Ser	Ala	Lys	Glu	Ile	Lys	Lys	
	50					55					60					
Gln	Val	Arg	Gly	Val	Pro	Trp	Asn	Phe	Thr	Phe	Asn	Val	Lys	Phe	Tyr	
65					70					75					80	
Pro	Pro	Asp	Pro	Ala	Gln	Leu	Thr	Glu	Asp	Ile	Thr	Arg	Tyr	Tyr	Leu	
				85					90					95		
Cys	Leu	Gln	Leu	Arg	Gln	Asp	Ile	Val	Ala	Gly	Arg	Leu	Pro	Cys	Ser	
			100					105					110			
Phe	Ala	Thr	Leu	Ala	Leu	Leu	Gly	Ser	Tyr	Thr	Ile	Gln	Ser	Glu	Leu	
		115					120					125				
Gly	Asp	Tyr	Asp	Pro	Glu	Leu	His	Gly	Val	Asp	Tyr	Val	Ser	Asp	Phe	
	130					135					140					
Lys	Leu	Ala	Pro	Asn	Gln	Thr	Lys	Glu	Leu	Glu	Glu	Lys	Val	Met	Glu	
145					150					155					160	
Leu	His	Lys	Ser	Tyr	Arg	Ser	Met	Thr	Pro	Ala	Gln	Ala	Asp	Leu	Glu	
				165					170					175		
Phe	Leu	Glu	Asn	Ala	Lys	Lys	Leu	Ser	Met	Tyr	Gly	Val	Asp	Leu	His	
			180					185					190			
Lys	Ala	Lys	Asp	Leu	Glu	Gly	Val	Asp	Ile	Ile	Leu	Gly	Val	Cys	Ser	
		195					200					205				
Ser	Gly	Leu	Leu	Val	Tyr	Lys	Asp	Lys	Leu	Arg	Ile	Asn	Arg	Phe	Pro	
	210					215					220					
Trp	Pro	Lys	Val	Leu	Lys	Ile	Ser	Tyr	Lys	Arg	Ser	Ser	Phe	Phe	Ile	
225					230					235					240	
Lys	Ile	Arg	Pro	Gly	Glu	Gln	Glu	Gln	Tyr	Glu	Ser	Thr	Ile	Gly	Phe	
				245					250					255		
Lys	Leu	Pro	Ser	Tyr	Arg	Ala	Ala	Lys	Lys	Leu	Trp	Lys	Val	Cys	Val	
			260					265					270			
Glu	His	His	Thr	Phe	Phe	Arg	Leu	Thr	Ser	Thr	Asp	Thr	Ile	Pro	Lys	
		275					280					285				
Ser	Lys	Phe	Leu	Ala	Leu	Gly	Ser	Lys	Phe	Arg	Tyr	Ser	Gly	Arg	Thr	
	290					295					300					
Gln	Ala	Gln	Thr	Arg	Gln	Ala	Ser	Ala	Leu	Ile	Asp	Arg	Pro	Ala	Pro	
305					310					315					320	
His	Phe	Glu	Arg	Thr	Ala	Ser	Lys	Arg	Ala	Ser	Arg	Ser	Leu			
				325					330							

<210> 26
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 <212> PRT

<213> Homo sapiens

<400> 26

Ile Ala Lys Glu Val Ser Thr Thr Glu Arg Thr Tyr Leu Lys Asp Leu
1 5 10 15

Glu Val Ile Thr Ser Trp Phe Gln Ser Thr Val Ser Lys Glu Asp Ala
20 25 30

Met Pro Glu Ala Leu Lys Ser Leu Ile Phe Pro Asn Phe Glu Pro Leu
35 40 45

His Lys Phe His Thr Asn Phe Leu Lys Glu Ile Glu Gln Arg Leu Ala
50 55 60

Leu Trp Glu Gly Arg Ser Asn Ala Gln Ile Arg Asp Tyr Gln Arg Ile
65 70 75 80

Gly Asp Val Met Leu Lys Asn Ile Gln Gly Met Lys His Leu Ala Ala
85 90 95

His Leu Trp Lys His Ser Glu Ala Leu Glu Ala Leu Glu Asn Gly Ile
100 105 110

Lys Ser Ser Arg Arg Leu Glu Asn Phe Cys Arg Asp Phe Glu Leu Gln
115 120 125

Lys Val Cys Tyr Leu Pro Leu Asn Thr Phe Leu Leu Arg Pro Leu His
130 135 140

Arg Leu Met His Tyr Lys Gln Val Leu Glu Arg Leu Cys Lys His His
145 150 155 160

Pro Pro Ser His Ala Asp Phe Arg Asp Cys Arg Ala Ala Leu Ala Glu
165 170 175

Ile Thr Glu Met Val Ala Gln Leu His Gly Thr Met Ile Lys Met Glu
180 185 190

Asn Phe

<210> 27

<211> 176

<212> PRT

<213> Homo sapiens

<400> 27

Val Leu Asn Glu Leu Ile Gln Thr Glu Arg Val Tyr Val Arg Glu Leu
1 5 10 15

Tyr Thr Val Leu Leu Gly Tyr Arg Ala Glu Met Asp Asn Pro Glu Met
20 25 30

Phe Asp Leu Met Pro Pro Leu Leu Arg Asn Lys Lys Asp Ile Leu Phe
35 40 45

Gly Asn Met Ala Glu Ile Tyr Glu Phe His Asn Asp Ile Phe Leu Ser
50 55 60

Ser Leu Glu Asn Cys Ala His Ala Pro Glu Arg Val Gly Pro Cys Phe

65					70					75				80	
Leu	Glu	Arg	Lys	Asp	Asp	Phe	Gln	Met	Tyr	Ala	Lys	Tyr	Cys	Gln	Asn
				85					90					95	
Lys	Pro	Arg	Ser	Glu	Thr	Ile	Trp	Arg	Lys	Tyr	Ser	Glu	Cys	Ala	Phe
			100					105					110		
Phe	Gln	Glu	Cys	Gln	Arg	Lys	Leu	Lys	His	Arg	Leu	Arg	Leu	Asp	Ser
		115					120					125			
Tyr	Leu	Leu	Lys	Pro	Val	Gln	Arg	Ile	Thr	Lys	Tyr	Gln	Leu	Leu	Leu
	130					135					140				
Lys	Glu	Leu	Leu	Lys	Tyr	Ser	Lys	Asp	Cys	Glu	Gly	Ser	Ala	Leu	Leu
145					150					155					160
Lys	Lys	Ala	Leu	Asp	Ala	Met	Leu	Asp	Leu	Leu	Lys	Ser	Val	Asn	Asp
				165					170					175	

<210> 28
 <211> 175
 <212> PRT
 <213> Rattus rattus

<400> 28															
Val	Met	Asn	Glu	Leu	Leu	Asp	Thr	Glu	Arg	Ala	Tyr	Val	Glu	Glu	Leu
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Leu	Cys	Val	Leu	Glu	Gly	Tyr	Ala	Ala	Glu	Met	Asp	Asn	Pro	Leu	Met
			20					25					30		
Ala	His	Leu	Ile	Ser	Thr	Gly	Leu	Gln	Asn	Lys	Lys	Asn	Ile	Leu	Phe
		35					40					45			
Gly	Asn	Met	Glu	Glu	Ile	Tyr	His	Phe	His	Asn	Arg	Ile	Phe	Leu	Arg
	50					55					60				
Glu	Leu	Glu	Ser	Cys	Ile	Asp	Cys	Pro	Glu	Leu	Val	Gly	Arg	Cys	Phe
65					70					75					80
Leu	Glu	Arg	Met	Glu	Glu	Phe	Gln	Ile	Tyr	Glu	Lys	Tyr	Cys	Gln	Asn
				85					90					95	
Lys	Pro	Arg	Ser	Glu	Ser	Leu	Trp	Arg	Gln	Cys	Ser	Asp	Cys	Pro	Phe
			100					105					110		
Phe	Gln	Glu	Cys	Gln	Lys	Leu	Asp	His	Lys	Leu	Ser	Leu	Asp	Ser	Tyr
		115					120					125			
Leu	Leu	Lys	Pro	Val	Gln	Arg	Ile	Thr	Lys	Tyr	Gln	Leu	Leu	Leu	Lys
	130					135					140				
Glu	Met	Leu	Lys	Tyr	Ser	Lys	His	Cys	Glu	Gly	Ala	Glu	Asp	Leu	Gln
145					150					155					160
Glu	Ala	Leu	Ser	Ser	Ile	Leu	Gly	Ile	Leu	Lys	Ala	Val	Asn	Asp	
				165					170					175	

<210> 29
 <211> 185

<212> PRT
<213> Mus musculus

<400> 29

Val Ala Lys Glu Leu Tyr Gln Thr Glu Ser Asn Tyr Val Asn Ile Leu
1 5 10 15
Ala Thr Ile Ile Gln Leu Phe Gln Val Pro Leu Glu Glu Glu Gly Gln
20 25 30
Arg Gly Gly Pro Ile Leu Ala Pro Glu Glu Ile Lys Thr Ile Phe Gly
35 40 45
Ser Ile Pro Asp Ile Phe Asp Val His Met Lys Ile Lys Asp Asp Leu
50 55 60
Glu Asp Leu Ile Ala Asn Trp Asp Glu Ser Arg Ser Ile Gly Asp Ile
65 70 75 80
Phe Leu Lys Tyr Ala Lys Asp Leu Val Lys Thr Tyr Pro Pro Phe Val
85 90 95
Asn Phe Phe Glu Met Ser Lys Glu Met Ile Ile Lys Cys Glu Lys Gln
100 105 110
Lys Pro Arg Phe His Ala Phe Leu Lys Ile Asn Gln Ala Lys Pro Glu
115 120 125
Cys Gly Arg Gln Ser Leu Val Glu Leu Leu Ile Arg Pro Val Gln Arg
130 135 140
Leu Pro Ser Val Ala Leu Leu Leu Asn Asp Leu Lys Lys His Thr Ala
145 150 155 160
Asp Glu Asn Pro Asp Lys Ser Thr Leu Glu Lys Ala Ile Gly Ser Leu
165 170 175
Lys Glu Val Met Thr His Ile Asn Asp
180 185

<210> 30

<211> 184

<212> PRT

<213> Homo sapiens

<400> 30

Ile Ala Asn Glu Leu Leu Gln Thr Glu Lys Ala Tyr Val Ser Arg Leu
1 5 10 15
His Leu Leu Asp Gln Val Phe Cys Ala Arg Leu Leu Glu Glu Ala Arg
20 25 30
Asn Arg Ser Ser Phe Pro Ala Asp Val Val His Gly Ile Phe Ser Asn
35 40 45
Ile Cys Ser Ile Tyr Cys Phe His Gln Gln Phe Leu Leu Pro Glu Leu
50 55 60
Glu Lys Arg Met Glu Glu Trp Asp Arg Tyr Pro Arg Ile Gly Asp Ile
65 70 75 80

Leu	Gln	Lys	Leu	Ala	Pro	Phe	Leu	Lys	Met	Tyr	Gly	Glu	Tyr	Val	Lys
			85						90					95	
Asn	Phe	Asp	Arg	Ala	Val	Glu	Leu	Val	Asn	Thr	Trp	Thr	Glu	Arg	Ser
			100					105					110		
Thr	Gln	Phe	Lys	Val	Ile	Ile	His	Glu	Val	Gln	Lys	Glu	Glu	Ala	Cys
			115				120					125			
Gly	Asn	Leu	Thr	Leu	Gln	His	His	Met	Leu	Glu	Pro	Val	Gln	Arg	Ile
	130					135					140				
Pro	Arg	Tyr	Glu	Leu	Leu	Leu	Lys	Asp	Tyr	Leu	Leu	Lys	Leu	Pro	His
145					150					155					160
Gly	Ser	Pro	Asp	Ser	Lys	Asp	Ala	Gln	Lys	Ser	Leu	Glu	Leu	Ile	Ala
				165					170					175	
Thr	Ala	Ala	Glu	His	Ser	Asn	Ala								
			180												